

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

B89 Claims 1-14. (canceled).

15. (currently amended): A pneumatic tire, in which a plurality of substantially quadrilateral land portions are arranged on a tread and defined by two sets of main grooves having a different angles with respect to a tire equatorial plane and in which auxiliary grooves are arranged in said land portions, characterized:

in that said land portion has an auxiliary groove extending therethrough from one side to another side; and

in that said auxiliary groove includes: a straight central auxiliary groove portion inclined in the same direction as that of the shorter diagonal line of the land portion and arranged at the central portion of said land portion; end portion auxiliary groove portions extending in directions different from that of said central auxiliary groove portion and opened into the main grooves which are the closest to the end portion auxiliary groove portions; and connection portions jointing said central auxiliary groove portion and said end portion auxiliary groove portions smoothly and having a radius of curvature; and

in that each of said end portion auxiliary groove portions resides in a quadrant different from the quadrant in which said central auxiliary groove portion resides.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/806,414 (Q63842)

16. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that said connection portions are formed into arcuate shapes having a radius of curvature of no less than 3 mm and no more than 10 mm.

17. (previously presented): A pneumatic tire as set forth in Claim 15 or 16, characterized in that said central auxiliary groove portion has a length of less than 70% of the length of said shorter diagonal line.

18. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that the angle formed between said shorter diagonal line and said central auxiliary groove portion is within ± 20 degrees.

19. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that said central auxiliary groove portion is arranged substantially on said shorter diagonal line.

20. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that said central auxiliary groove portion has a depth of no less than 30 % of the depth of said main grooves.

21. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that the angle formed between said end portion auxiliary groove portions and the neighborhood main grooves, in which said end portion auxiliary groove portions are not opened, of said main grooves is no more than 30 degrees.

22. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that said end portion auxiliary groove portions are as deep as or shallower than said central auxiliary groove portion.

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23. (previously presented): A pneumatic tire as set forth in Claim 22, characterized in that the depth of said end portion auxiliary groove portions is no less than 10% and less than 30% of the depth of said main grooves.

24. (previously presented): A pneumatic tire as set forth in Claim 15, characterized in that said auxiliary groove includes chamfered portions formed at the two corner portions of the opened portions of said auxiliary groove in the tread, when viewed in a section normal to the longitudinal direction at each point of the longitudinal direction.

25. (previously presented): A pneumatic tire as set forth in Claim 24, characterized in that said chamfered portions have a gently bulging sectional shape in said section normal to the longitudinal direction of said auxiliary groove.

26. (previously presented): A pneumatic tire as set forth in Claim 24 or 25, characterized in that the maximum of the depth H of said chamfered portions is no less than 5% and no more than 50% of the groove depth D of said auxiliary groove.

27. (previously presented): A pneumatic tire as set forth in Claim 24, characterized in that the maximum of the length L of said chamfered portions, as measured in parallel with the tread, in said section normal to the longitudinal direction of said auxiliary groove is no less than 5 % and no more than 50 % of the maximum width W, as measured in the tire axial direction, of the land portion having said auxiliary groove.

28. (currently presented): A pneumatic tire as set forth in Claim 24, characterized in that the depth H of said chamfered portions at each point in the longitudinal direction of said

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auxiliary groove is changed gently so that the change in the ground contact pressure which occurs inside the land portion under a lateral force ~~may be~~ is small.

29. (previously presented): A pneumatic tire as set forth in Claim 28, characterized in that the depth H of said chamfered portions takes its maximum at the land portion ends of said auxiliary groove and at the central portion of the land portion.

30. (new): A pneumatic tire as set forth in claim 15, characterized in that the angle formed between said central auxiliary groove portion and each of said end portion auxiliary groove portions is obtuse.

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AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings include the following changes:

In Figs. 13A and 13B, the “Prior Art” label is added

Attachment: Replacement Sheet